

## General Algebra II Worksheet #2 Unit 8 selected solutions

Perform the indicated operations.

$$2. (4x + 1)(3x + 4) = \underline{12x^2 + 19x + 4}$$

$$4. (5x - 2)(x - 7) = \underline{5x^2 - 37x + 14}$$

$$5. (3x + 8)(2x - 3) = \underline{6x^2 + 7x - 24}$$

$$8. (3x - 5)(7x + 5) = \underline{21x^2 - 20x - 25}$$

Factor each of the following.

$$10. 15x^2 + 26x + 8 = \underline{(5x + 2)(3x + 4)}$$

$$12. 6x^2 - 25x + 25 = \underline{(3x - 5)(2x - 5)}$$

$$13. 6x^2 - 11x - 10 = \underline{(3x + 2)(2x - 5)}$$

$$16. 9x^2 + 13x - 10 = \underline{(9x - 5)(x + 2)}$$

Use the factoring method to solve each of the following equations.

$$19. 14x^2 - 41x + 15 = 0$$

$$22. 20x^2 - 3x - 35 = 0$$

$$25. 12x^2 + x - 6 = 0$$

$$(2x - 5)(7x - 3) = 0$$

$$(5x - 7)(4x + 5) = 0$$

$$(4x + 3)(3x - 2) = 0$$

$$2x - 5 = 0 \text{ or } 7x - 3 = 0$$

$$5x - 7 = 0 \text{ or } 4x + 5 = 0$$

$$4x + 3 = 0 \text{ or } 3x - 2 = 0$$

$$x = 5/2 \text{ or } x = 3/7$$

$$x = 7/5 \text{ or } x = -5/4$$

$$x = -3/4 \text{ or } x = 2/3$$

$$28. x^2 + (x + 2)^2 = (x + 4)^2$$

$$31. 6x^2 - 5 = 7x - 2$$

$$x^2 + x^2 + 4x + 4 = x^2 + 8x + 16$$

$$6x^2 - 7x - 3 = 0$$

$$x^2 - 4x - 12 = 0$$

$$(3x + 1)(2x - 3) = 0$$

$$(x - 6)(x + 2) = 0$$

$$3x + 1 = 0 \text{ or } 2x - 3 = 0$$

$$x - 6 = 0 \text{ or } x + 2 = 0$$

$$x = -1/3 \text{ or } x = 3/2$$

$$x = 6 \text{ or } x = -2$$